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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHAKERI, HADI

ART UNIT PAPER NUMBER

3723

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/763,469

Applicant(s)

HOUSE ET AL.

Examiner

Hadi Shakeri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 2-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Claim Objections***

1. Claim 16 is objected to because of the following informalities: "one different slurry solution" should be changed to, --one slurry solution--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

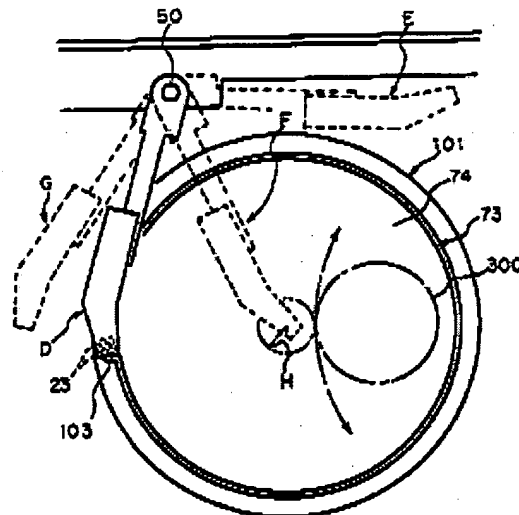
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Togawa et al. (6,338,669).

Togawa et al. discloses all of the limitations of claims 1, and 8, i.e., a slurry arm (10) "adapted" to pivot over a pivoting axis (50) having two or more nozzles (23) adapted to allow simultaneous deposition of two or more streams of slurry of one solution at different flow rates or two or more different slurry (e.g., 04:39-45 or Fig. 7).

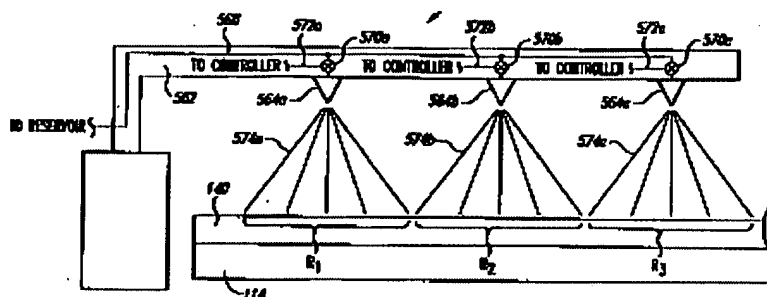


Regarding claim 4, Togawa et al. meets the limitations, ports "adaptable" to provide different slurries of different compositions, 04:44.

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4. Claims 1-3, 5-12, 14-16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Joslyn (6,722,943).

Joslyn discloses all of the limitations of claims 1, 8 and 14, i.e., a slurry arm (562) "adapted" to pivot over a pivoting axis (by the



actuator 166) having two or more nozzles (564a-c) adapted to allow simultaneous deposition of two or more streams of slurry of one solution at different flow rates or two or more different slurry (e.g., Fig. 9).

Regarding claim 14, Joslyn meets the limitations, i.e., a controller (780) to position the discharge to the contact area (144) meeting the language of coordinating with the substrate holder, and wherein the discharge configured for the desired location, would meet pivoting the arm for the non-fixed support embodiments, i.e., having actuator (166), e.g., 07:61.

Regarding claims 9-12, Joslyn meets the limitations, i.e., the controller adjusts the flow by sensing different parameters in real-time, including sensing the drag force, which would inherently depend upon the rotational velocity of the pad, holder or both, and positions the discharge at the contact area (144), meeting the language as recited.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 4, 12 and 17 are rejected under 35 U.S.C. 103(a) as obvious over Joslyn in view of Togawa et al.

Joslyn meets all of the limitations of the above claims, except for disclosing controlling different ports of the nozzle to provide different slurry solutions. Togawa et al teaches improving polishing rate by providing slurry at different location of the pad by a slurry arm having several ports, connected to different tanks. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of Joslyn by supplying different solutions (which would intently have different relative concentration) to the pad as taught by Togawa et al to improve polishing uniformity depending on the application.

7. Claims 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as obvious over Joslyn in view of Mandigo et al. (6,602,436)

Joslyn is considered to meet all of the limitations of claims 9-11 and 13, including adjusting the rotation of the arm, as indicated in the above, however, in the alternative, Mandigo et al. is cited. Mandigo et al. teaches that it is known in the art to control the removal rate uniformity by controlling various aspect of polishing, e.g., by increasing the ratio of the polishing velocity with respect to dissolution velocity of a polishing agent, (01:62-64). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of Joslyn by controlling the polishing process by adjusting the rotational speed of the slurry arm (positioning the arm) based on the rotational velocity of the pad, in view of Mandigo et al. to minimize dishing.

Response to Arguments

8. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

9. Prior art made of record and not relied upon are considered pertinent to applicant's disclosure. Kimura et al. and Sandhu et al. are cited to show related inventions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is 571-272-4495. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail, III can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Hadi Shakeri', with a stylized flourish at the end.

Hadi Shakeri
Primary Examiner
Art Unit 3723

hs
December 19, 2005